CHE75W SERIES

75 WATT 4:1 INPUT DC-DC CONVERTERS SINGLE OUTPUT

FEATURES

* 75W Isolated Output
* Half-Brick Size, Six-Sided Shield Metal Case
* High Efficiency up to 92.5%
* Regulated Outputs
* 4:1 Input Range
* 250KHz Switching Frequency
* Continuous Short Circuit Protection
* Input Under-Voltage Protection
* Over Temperature/Voltage/Current Protection
* Remote On/Off
* Full Load Operation up to 65℃ with Heat-Sink M-C091 Natural Convention
* No Tantalum Capacitor Inside
* Safety Meets IEC/EN/UL 62368-1

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.		CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD	(4)	(3)	
CHE75W-24S3V3	9-36 VDC	3.3 VDC	0 mA	20A	150 mA	3.11 A	87.5	88.5	20000μF
CHE75W-24S05	9-36 VDC	5.0 VDC	0 mA	15 A	150 mA	3.43 A	90.5	91	15000μF
CHE75W-24S12	9-36 VDC	12 VDC	0 mA	6.25 A	150 mA	3.41 A	91	91.5	6250μF
CHE75W-24S15	9-36 VDC	15 VDC	0 mA	5 A	150 mA	3.41 A	91	91.5	5000μF
CHE75W-24S24	9-36 VDC	24 VDC	0 mA	3.12 A	70 mA	3.47 A	90	90	3120uF(2)
CHE75W-24S48	9-36 VDC	48 VDC	0 mA	1.56 A	70 mA	3.51 A	90	89	1560μF(2)
CHE75W-48S3V3	18-75 VDC	3.3 VDC	0 mA	20A	80 mA	1.54 A	88.5	89	20000μF
CHE75W-48S05	18-75 VDC	5.0 VDC	0 mA	15 A	80 mA	1.70 A	92	92	15000μF
CHE75W-48S12	18-75 VDC	12 VDC	0 mA	6.25 A	80 mA	1.70 A	92	92	6250μF
CHE75W-48S15	18-75 VDC	15 VDC	0 mA	5 A	70 mA	1.69 A	92.5	92.5	5000uF
CHE75W-48S24	18-75 VDC	24 VDC	0 mA	3.12 A	70 mA	1.73 A	91	90.5	3120μF(2)
CHE75W-48S48	18-75 VDC	48 VDC	0 mA	1.56 A	70 mA	1.74 A	91.5	90	1560μF(2)

NOTE:

1. Nominal Input Voltage 24, 48VDC.
2. Require a 10uF Aluminum Capacitor Connected Between +Vout and –Vout for 24 & 48Vout Models.
3. Measured at Nominal Input Voltage.
4. Measured at 12VDC for 24SXX, 24VDC for 48SXX.

SPECIFICATIONS

All Specifications Typical at Nominal Line, Full Load, and 25℃ Unless Otherwise Noted

INPUT SPECIFICATIONS:

Input Voltage Range ..... 24V 9-36V
48V 18-75V
Input Surge Voltage (100ms max.) ..... 24V ..... 50Vdc max.
48V ..... 100Vdc max.
Under Voltage Lockout ..... 24Vin power up 8.8V
24Vin power down 8.0V
48Vin power up 17V
48Vin power down 16V
Positive Logic Remote On/Off (see note 4&5)
Input Filter ..... PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy: ..... ±1.5% max.
Transient Response:25% Step Load Change ..... <500u sec.
External Trim Adj. Range ..... ±10%
Ripple & Noise, 20MHz BW (see note3)
3.3V & 5V ..... 40mV RMS, 100mV pk-pk max.
12V & 15V ..... 60mV RMS, 120mV pk-pk max.
24V ..... 100mV RMS, 240mV pk-pk max.
48V ..... 200mV RMS, 480mV pk-pk max.
Temperature Coefficient ..... ±0.03%/°C max.
Short Circuit Protection .....Continuous
Line Regulation (note1) ..... ±0.2% max.
Load Regulation (note2) ..... ±0.2% max.
Over Voltage Protection Trip Range, % Vo Nom. 115-140%
Current Limit ..... 110%-140% Nominal Output
Start up Time ..... 3.3V & 5V & 48V ..... 10ms typ.
12V & 15V & 24V ..... 15ms typ.

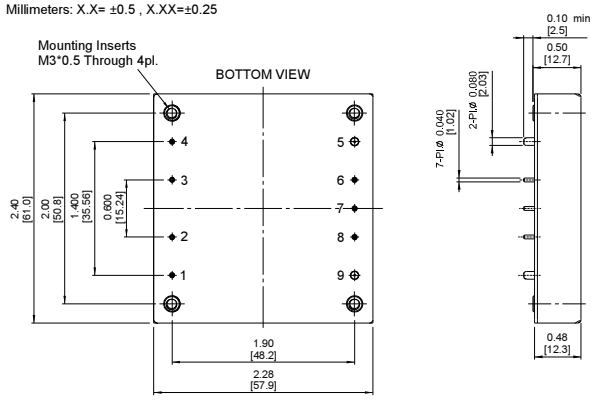
GENRAL SPECIFICATIONS:

Efficiency ..... See Table
Isolation Voltage ..... Input/Output ..... 1500VDC min.
Input/Case ..... 1500VDC min.
Output/Case ..... 1500VDC min.
Isolation Resistance ..... 10^7 Ohm min.
Isolation Capacitance ..... 1000pF typ.
Switching Frequency ..... 250KHz typ.
Operating Case Temperature ..... -40℃ to 105°C
Storage Temperature ..... -55℃ to +105°C
Thermal Shutdown, Case Temp. ..... 110°C typ.
Humidity ..... 95% RH max. Non Condensing
MTBF ... MIL-HDBK-217F. GB. 25℃. Full Load ..... Vo:15V&24V .... 950Khrs typ.
Others ..... 820Khrs typ.
Dimensions ..... 2.28×2.40x0.50 inches (57.9x61.0×12.7 mm)
Case Material ..... Aluminum with Non-Conducted Base
Weight 95g

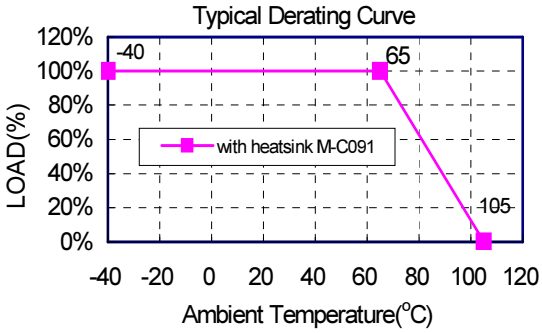
NOTE:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF tantalum and 1uF ceramic capacitor across output.
   (24V & 48V:10uF aluminum and 1uF ceramic capacitor across output.)
4. Logic compatibility ..... open collector refer to -Vin
   Module on ..... >3.5Vdc to 75Vdc or Open Circuit
   Module off ..... 0 to < 1.2Vdc
5. Suffix "N" to the model number with negative logic remote on/off
   Module on ..... 0 to < 1.2Vdc
   Module off ..... >3.5Vdc to 75Vdc or Open Circuit

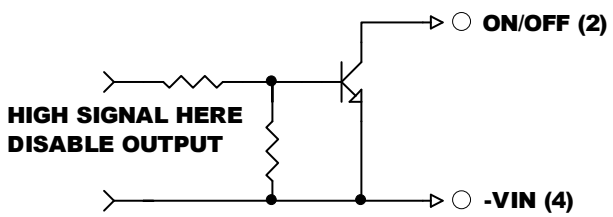
CASE HB
All Dimensions In Inches(mm)
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010
Millimeters: X.X= ±0.5 , X.XX=±0.25



Pin	Function
1	+Vin
2	ON/OFF
3	CASE
4	-Vin
5	-Vout
6	-Sense
7	Trim
8	+Sense
9	+Vout



REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM